REMARKS

Claims 1-19 are all the claims presently pending in the application.

Claims 1-2, 6-7, and 11-19 stand rejected under 35 U.S.C. § 102(b) as being

unpatentable over Ausubel (U.S. Patent No. 5,905,975). Claims 3-5 stand rejected under 35

U.S.C. § 103(a) as being unpatentable over Ausubel, and further in view of McAfee, et al.

(U.S. Patent No. 6,718,312 B1) (hereinafter "McAfee"). Claims 8-10 stand rejected under 35

U.S.C. § 103(a) as being unpatentable over Ausubel in view of Macready, et al. (U.S.

Publication No. 2002/0016759) (hereinafter "Macready").

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the invention, as recited in claim 1, is directed to a computer

implemented method for an auction including establishing an auction system, receiving at

least one constraint specified by a participant in the auction, wherein the constraint

characterizes combinations of items desired by the participant within the auction system, and

determining a winner in the auction, based on the constraint specified by the participant.

Another aspect of the invention, as recited in claim 13, is directed to a program

medium executable in a computer system for facilitating an auction. The program medium

includes machine-readable instructions to cause the computer system to execute steps for

establishing an auction system, enabling the auction system so that it is responsive to

constraints specified by a participant in the auction, wherein the constraints characterize

combinations of items desired by the participant within the auction system, and generating a

Docket No.: YOR920010417US1   3
Serial No.:   09/850,383

proposal, based on the constraints specified by the participant, using a column generation formulation.

A further aspect of the invention, as recited in claim 14, is directed to a computer implemented method for facilitating an auction including receiving constraints specified by a participant in the auction, wherein the constraints characterize combinations of items desired by the participant within the auction system, and formulating a winner determination problem, with the constraints specified by the participant, as an integer problem.

The claimed invention provides, amongst other features, at least one constraint specified by a participant in the auction, wherein the at least one constraint characterizes combinations of items desired by the participant within the auction system. In this manner, each bidder may place individual bids for items of interest to them and specify a value for each item of interest. The constraint is specified by the bidders, rather than the sellers, and each bidder can specify their own constraint (or set of constraints), such as total budget, "either/or" constraints, or precedent constraints. The invention takes the constraint specified by each bidder and determines the winning bids that maximize total revenue without violating any of the bidders' individual constraints.

II. THE PRIOR ART REFERENCES

A. The Ausubel Reference

The Examiner alleges that the invention of claims 1, 2, 6, 7 and 11-19 are anticipated by Ausubel. However, Applicant respectfully submits that the reference does not teach or suggest each and every element of the claimed invention.

Docket No.: YOR920010417US1   4
Serial No.:   09/850,383

Ausubel discloses a computer implemented system and method of executing an auction including at least two intelligent sytems. (See Ausubel at Abstract)

However, Ausubel does not teach or suggest at least one constraint specified by a participant in the auction, wherein the constraint characterizes combinations of items desired by the participant within the auction system, as in independent claims 1, 13 and 14.

In fact, the Examiner concedes that Ausubel does not disclose such a feature in Item 2, page 5 of the Office Action. Rather, the Examiner alleges that Ausubel teaches or suggests the use of constraints and combination of items desired by participants.

However, Ausubel discloses that the bidders are required to express combinatorial bids. As such, the bidders in Ausubel must explicitly list all acceptable combinations of items along with a value of each listed combination. However, bid formation and valuation in this manner is complex, and typically performed by experts, sometimes with the aid of economic modeling tools.

In the present invention, on the other hand, the invention does not require the bidders to express combinatorial bids. As noted above, each bidder (e.g. a casual eBay user with no economic or mathematical expertise) can place individual bids for each item of interest to him/her while specifying a value for each item of interest. The present invention provides a method that takes the constraint(s) specified by each bidder and determines the winning bids from the individual bids placed by the bidder that maximize total revenue without violating any of the bidder's specified constraint(s).

Ausubel makes no reference or suggestion to such features. In fact, the Examiner concedes that Ausubel does not disclose determining a winner in the auction, based on the constraint specified by the participant, wherein the constraint characterizes combinations of

Docket No.: YOR920010417US1   5
Serial No.:   09/850,383

items. Rather, the Examiner attempts to provide a definition of a "winner" in an auction that

includes both a seller and bidder in a mutually satisfying transaction. However, the Examiner

has mischaracterized the plain language of the claim. Clearly, the "winner," as used in

independent claim 1, refers to the winning combination of bids as determined based on the at

least one specified constraint.

Notwithstanding, even assuming arguendo that Ausubel suggests that the transactions

result from the auctions taught in Ausubel, there is no teaching or suggestion that "*the*

constraint characterizes combinations of items desired by the participant within the auction

system; and determining a winner in the auction, based on the constraint specified by the

participant," as recited in claim 1. In this manner, as noted above, by the participant

specifying a constraint that characterizes combinations of desired items, the winning bids can

be determined from several independent bids for a variety of desired items submitted by the

participant based on the specified constraint. Thus, the claimed invention does not require

the bidders to express combinatorial bids. Indeed, Ausubel does not even recognize the

desirability or benefit of providing such a feature.

As noted above, the bidders in Ausebel must explicitly list all acceptable

combinations of items along with a value of each listed combination. Ausubel actually

makes no reference or suggestion to receiving at least one constraint specified by a participant

in the auction, that characterizes combinations of items desired by the participant within the

auction system, and determining a winner based on the specified constraints, as in

independent claim 1. In fact, as noted above, the Examiner concedes that Ausubel does not

disclose such a feature in Item 2, page 5 of the Office Action.

Docket No.: YOR920010417US1   6
Serial No.:   09/850,383

Clearly, there are elements of independent claim 1 that are neither taught nor suggested by Ausubel.

Further, Ausubel does not teach or suggest "*generating a proposal based on the constraints, specified by the participant, using a column generation formulation*," as recited in independent claim 13. In this manner, by the participant specifying constraints that characterize combinations of desired items, a proposal including a set of bids from a single participant may be generated based on the specified constraints using a column generation formula. The use of a column generation formula improves solvability and reduces computation time. (See Application at page 13, lines 10-16)

In Ausubel, on the other hand, the bidders must explicitly list all acceptable combinations of items along with a value of each listed combination, as noted above. In fact, Ausubel makes no reference or suggestion to generating a proposal based on the constraints, specified by the participant, using a column generation formulation, as in independent claim 13. In fact, the Examiner essentially concedes that Ausubel does not teach or suggest the above feature. Rather, the Examiner alleges that analyzing and displaying data in columns and matrices is old and well-known in the art and simply alleges that Ausubel suggests the feature indicating that "it would have been obvious" to combine the art of Ausubel with machine-readable instructions and making use of column generation techniques. (Emphasis added)

Notwithstanding, even assuming arguendo that analyzing and displaying data in columns and matrices is old and well-known in the art, there is no motivation or suggestion in Ausubel to urge the combination alleged by the Examiner. Indeed, contrary to the Examiner's allegations, Ausubel makes no reference or suggestion to generating a proposal

Docket No.: YOR920010417US1   7
Serial No.:   09/850,383

based on the constraints, specified by the participant, using a column generation formulation, as in claim 13, and certainly does not teach or suggest such a combination. In fact, Ausubel does not teach or suggest column generation formulation at all. Clearly, no person of ordinary skill in the art would have considered combining the arts as alleged by the Examiner, absent impermissible hindsight. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to form the combination alleged by the Examiner.

Clearly, there are elements of independent claim 13 that are neither taught nor suggested by Ausubel.

Additionally, Ausubel does not teach or suggest "*formulating a winner determination problem, with the constraints specified by the participant, as an integer problem,*" as recited in independent claim 14. In this manner, by the participant specifying constraints that characterize combinations of desired items, a winner determination problem may be formulated based on the specified constraints as an integer problem. Thus, winner may be readily determined through formulation of an integer problem that includes the specified constraints. Ausubel makes no reference or suggestion to such features.

Notwithstanding, even assuming arguendo that Ausubel suggests the processing of an auction using an integer approach, as alleged by the Examiner, there is no teaching or suggestion that "*the constraint characterizes combinations of items desired by the participant within the auction system; and formulating a winner determination problem, with the constraints specified by the participant, as an integer problem,*" as recited in claim 14. In this manner, as noted above, by the participant specifying constraints that characterize combinations of desired items, a winner determination problem may be readily formulated as

Docket No.: YOR920010417US1   8
Serial No.:   09/850,383

an integer problem that includes the specified constraints in order to determine the winning

bids. Thus, the claimed invention does not require the bidders to express combinatorial bids,

as in Ausubel. Indeed, Ausubel does not even recognize the desirability or benefit of

providing such a feature.

Again, the bidders in Ausebel must explicitly list all acceptable combinations of items

along with a value of each listed combination. Ausubel actually makes no reference or

suggestion to receiving constraints specified by a participant in the auction, that characterize

combinations of items desired by the participant within the auction system, and formulating a

winner determination problem, with the constraints specified by the participant, as an integer

problem, as in independent claim 14.

Clearly, there are elements of independent claim 14 that are neither taught nor

suggested by Ausubel.

In light of the above, there are elements of the invention of claims 1, 2, 6, 7 and 11-19

that are not taught or suggested by Ausubel. Therefore, the Examiner is respectfully

requested to withdraw this rejection.

B. The McAfee Reference

The Examiner alleges that Ausubel would have been combined with McAfee to form

the invention defined in claims 3-5. However, Applicant submits that these references would

not have been combined and even if combined, the combination would not teach or suggest

each and every element of the claimed invention.

McAfee discloses a method and system for dynamic combinatorial auctions

employing bid composition restrictions. (See McAfee at Abstract)

Docket No.: YOR920010417US1   9
Serial No.:   09/850,383

Applicant respectfully submits that these references would not have been combined as alleged by the Examiner. Indeed, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, contrary to the Examiner's allegations, neither of these references teaches or suggests their combination.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

The Examiner concedes that Ausubel does not teach or suggest that the constraint characterizes combinations of items desired by the participant within the auction system, as recited in claims 3-5. The Examiner also concedes that Ausubel fails to teach or suggest "*enabling the auction system so that it is responsive to a budget constraint,*" as recited in claim 4, or that "*the budget constraint is specified by the participant,*" as recited in claim 5. Rather, the Examiner alleges that Ausubel teaches or suggests the use of constraints and combination of items desired by participants and attempts to rely on McAfee to make up for the deficiencies of Ausubel.

However, as noted above, Ausubel discloses that that the bidders are required to express combinatorial bids in which the bidders must explicitly list all acceptable combinations of items along with a value of each listed combination. The present invention, on the other hand, does not require the bidders to express combinatorial bids. Rather, the claimed method takes the constraints specified by each bidder and determines the winning bids from the individual bids placed by the bidder that maximize total revenue without

Docket No.: YOR920010417US1   10
Serial No.:   09/850,383

violating any of the bidder's specified constraints. Ausubel makes no reference or suggestion

to such features.

Further, McAfee does not make up for the deficiencies of Ausubel above. In fact,

nowhere do the passages cited by the Examiner teach or suggest that the constraint

characterizes combinations of items desired by the participant within the auction system, as in

claims 3-5.

Rather, McAfee addresses simultaneous ascending auctions (SAA), in which

multiple items are auctioned simultaneously in fixed rounds. However, in an SAA there are

fixed, synchronized rounds, with the entire allocation being determined at the end of each

round. Further, in an SAA, as disclosed in McAfee, the additional "restrictions" are placed

by the auctioning organization or seller and apply uniformly to all bidders. In fact, McAfee

makes no reference or suggestion to the system receiving at least one constraint specified by a

bidder in the auction, wherein the constraint characterizes combinations of items desired by

the bidder, as in claims 3-5.

Clearly, neither Ausubel, nor McAfee, nor any combination thereof, teaches or

suggests that the constraint characterizes combinations of items desired by the participant

within the auction system, as in claims 3-5. Thus, McAfee fails to make up for the

deficiencies of Ausubel described above.

Therefore, Applicant submits that there are elements of the invention of claims 3-5

that are not taught or suggested either Ausubel, or McAfee, or any combination thereof.

Therefore, the Examiner is respectfully requested to withdraw this rejection.

Docket No.: YOR920010417US1   11
Serial No.:   09/850,383

C. The Macready Reference

The Examiner alleges that Ausubel would have been combined with Macready to form the invention defined in claims 8-10. However, Applicant submits that these references would <u>not</u> have been combined and even if combined, the combination would <u>not</u> teach or suggest each and every element of the claimed invention.

Macready discloses a system which allows buyers to define their preferences and sellers to define their capabilities, then determines which trading points maximize the utility of the buyer. (Macready at Abstract)

Applicant respectfully submits that these references would not have been combined as alleged by the Examiner. Indeed, no person of ordinary skill in the art would have considered combining these disparate references, <u>absent impermissible hindsight</u>.

In fact, Applicant submits that the Examiner can point to <u>no motivation or suggestion</u> in the references to urge the combination as alleged by the Examiner. Indeed, contrary to the Examiner's allegations, neither of these references teach or suggest their combination.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has <u>failed to make a prima facie case of obviousness</u>.

The Examiner concedes that Ausubel does <u>not</u> teach or suggest that *"the seller constraints specify a minimum value for a combination of items,"* as recited in claim 8, or that *"the seller constraints specify a minimum value for a combination of a minimum number of items to be sold,"* as recited in claim 9, or that *"the seller constraints specify a minimum value for a combination of items correlated to a precedence relationship,"* as in claim 10.

Docket No.: YOR920010417US1   12
Serial No.:   09/850,383

Rather, the Examiner attempts to rely on Macready to make up for the deficiencies of

Ausubel.

Macready discloses representing buyer preferences and seller capabilities in terms of

multidimensional mathematical expressions, and then searching and visualizing this space for

the purpose of identifying one or more potential matches. Macready provides a compact

encoding of buyer and seller information and a notion of "distance" between a request and a

capability or offering, to enable rapid searching by a computer implemented algorithm.

However, Macready makes no reference to the seller constraints specifying any of a

minimum value for a combination of items, or a minimum number of items to be sold, or a

minimum value for a combination of items correlated to a precedence relationship, as in

claims 8-10. Rather, Macready merely notes that "[b]uyers and sellers may express

constraints over both continuous and discrete variables," (Macready at page 6, paragraph

[0077]) and that "a seller [may] express additional linear constraints" (Macready at page 8,

paragraph [0108]).

Further, Macready fails to make up for the deficiencies of Ausubel and McAfee

described above directed to that the constraint characterizes combinations of items desired by

the participant within the auction system, as in the claimed invention.

Thus, even assuming arguendo that Macready may disclose the seller constraints

specifying any of a minimum value for a combination of items, or a minimum number of

items to be sold, or a minimum value for a combination of items correlated to a precedence

relationship, as alleged by the Examiner, there is no teaching or suggestion in Macready that

the constraint characterizes combinations of items desired by the participant within the

auction system, as in the invention of claims 8-10. Indeed, the cited reference does not even

Docket No.: YOR920010417US1   13
Serial No.:   09/850,383

recognize the desirability or benefit of providing such a feature. Therefore, Macready clearly

does not make up for the deficiencies of Ausubel and McAfee.

Therefore, Applicant submits that there are elements of the invention of claims 8-10

that are not taught or suggested either Ausubel, Macready, McAfee, or any combination

thereof. Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. CONCLUSION

In view of the foregoing, Applicant submits that claims 1-19, all the claims presently

pending in the application, are patentably distinct over the prior art of record and are

allowable, and that the application is in condition for allowance. Such action would be

appreciated.

Should the Examiner find the application to be other than in condition for allowance,

the Examiner is requested to contact the undersigned attorney at the local telephone number

listed below to discuss any other changes deemed necessary for allowance in a telephonic or

personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR

§1.136. The Commissioner is authorized to charge any deficiency in fees, including

Docket No.: YOR920010417US1   14
Serial No.:   09/850,383

extension of time fees, or to credit any overpayment in fees to Assignee's Deposit Account

No. 50-0510.

Respectfully Submitted,

Date: __April 10__, 2006

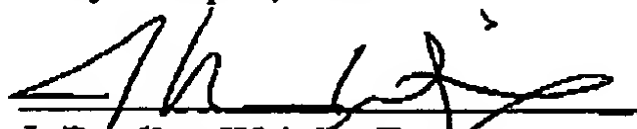J. Bradley Wright, Esq.
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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Response was filed by facsimile with the United
States Patent and Trademark Office, Examiner Siegfried E. Chencinski, Group Art Unit
#3628 at fax number (571) 273-8300 this 10th day of April, 2006.

Date: _4/10/06_

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